

Appendix I

**U. S. Army Corps of Engineers
Dioxin Results of the Sediments
In the Saginaw River and Bay
Shipping Channel
1998/1999**

DATA FLAGS

In order to assist with data interpretation, data qualifier flags are used on the final reports. The most commonly used flags are:

- ND** = analyte not detected. Value is the detection limit.
- B** = analyte has been detected in the laboratory method blank as well as in an associated field sample.
- E** = indicates a concentration based on an analyte to internal standard ratio which exceeds the range of the calibration curve. Values which are outside the calibration curve are estimates only.
- I** = indicates labeled standards have been interfered with on the GC column by coeluting, interferent peaks. All quantitations relative to this standard, therefore, may be underestimated.
- J** = indicates a concentration based on an analyte to internal standard ration which is below the calibration curve. Values outside the calibration curve are estimates only.
- PR** = indicates that a GC peak is poorly resolved. The concentrations or amounts reported for such peaks are most likely overestimated.
- Q** = indicates the presence of QC ion instabilities caused by quantitative interferences.
- S** = indicates that the response of a specific PCDD/PCDF isomer has exceeded the normal dynamic range of the mass spectrometer detection system. The corresponding signal is saturated and the reported analyte concentration is a 'minimum estimate'. Results for saturated analytes are reported as greater than the upper calibration limit.
- U** = indicates that a specific isomer cannot be resolved from a large, coeluting interferent GC peak. The specific isomer is reported as not detected as a valid concentration cannot be determined. The calculated detection limit, therefore, should be considered an underestimated value.
- V** = indicates that, although the percent recovery of a labeled standard may be below a specific QC limit, the signal-to-noise ratio of the peak is greater than ten-to-one. The standard is considered reliably quantifiable. All quantitations derived from the standard are considered valid as well.
- X** = indicates that a polychlorodibenzofuran (PCDF) peak has eluted at the same time as the associated diphenyl ether (DPE) and that the DPE peak intensity is at least ten percent of the total PCDF peak intensity. Total PCDF values are flagged "X" if the total DPE contribution to the total PCDF value is greater than ten percent. All PCDF peaks that are significantly influenced by the presence of DPE peaks
- EMPC** = are either reported as "estimated maximum possible concentration" {EMPC} values without regard to the isotopic abundance ratio, or are included in the detection limit value depending on the analytical method.

Army Corps of Engineers Saginaw Bay Sediment Results**SB9901**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		9.6
12378-PeCDD	1		8.7
123478-HxCDD	0.1	J	4.1
123678-HxCDD	0.1		22
123789-HxCDD	0.1		14.5
1234678-HpCDD	0.01		312
12346789-OCDD	0.0001		2830
2378TCDF	0.1		373
12378-PeCDF	0.05		189
23478-PeCDF	0.5		164
123478-HxCDF	0.1		200
123678-HxCDF	0.1		48.4
234678-HxCDF	0.1		32
123789-HxCDF	0.1	J	3.1
1234678-HpCDF	0.01		528
1234789-HpCDF	0.01		29
12346789-OCDF	0.0001		710
Total TEQ:	Non-Detects = Detection Limit		190
	Non-Detects = 1/2 d.l.		190
	Non-Detects = zero		190

Army Corps of Engineers Saginaw Bay Sediment Results**SB9902**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		12.3
12378-PeCDD	1		11.4
123478-HxCDD	0.1		6.1
123678-HxCDD	0.1		34.7
123789-HxCDD	0.1		19.9
1234678-HpCDD	0.01		532
12346789-OCDD	0.0001	E	4500
2378TCDF	0.1		338
12378-PeCDF	0.05		184
23478-PeCDF	0.5		147
123478-HxCDF	0.1		176
123678-HxCDF	0.1		52.1
234678-HxCDF	0.1		35.9
123789-HxCDF	0.1	J	2
1234678-HpCDF	0.01		746
1234789-HpCDF	0.01		36.4
12346789-OCDF	0.0001		1170
Total TEQ:	Non-Detects = Detection Limit		190
	Non-Detects = 1/2 d.l.		190
	Non-Detects = zero		190

Army Corps of Engineers Saginaw Bay Sediment Results**SB9903**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		7.4
12378-PeCDD	1		9.4
123478-HxCDD	0.1		5.3
123678-HxCDD	0.1		26
123789-HxCDD	0.1		17.9
1234678-HpCDD	0.01		346
12346789-OCDD	0.0001		2820
2378TCDF	0.1		255
12378-PeCDF	0.05	X	117
23478-PeCDF	0.5		98.1
123478-HxCDF	0.1		116
123678-HxCDF	0.1		36.3
234678-HxCDF	0.1		25.3
123789-HxCDF	0.1	J	2.7
1234678-HpCDF	0.01		597
1234789-HpCDF	0.01		23.5
12346789-OCDF	0.0001		555
Total TEQ:	Non-Detects = Detection Limit		130
	Non-Detects = 1/2 d.l.		130
	Non-Detects = zero		130

Army Corps of Engineers Saginaw Bay Sediment Results**SB9904**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		7
12378-PeCDD	1		8
123478-HxCDD	0.1		5
123678-HxCDD	0.1		21.9
123789-HxCDD	0.1		14.3
1234678-HpCDD	0.01		270
12346789-OCDD	0.0001		2450
2378TCDF	0.1		210
12378-PeCDF	0.05		110
23478-PeCDF	0.5		77.3
123478-HxCDF	0.1		94.9
123678-HxCDF	0.1		30.3
234678-HxCDF	0.1		25.6
123789-HxCDF	0.1	J	1.8
1234678-HpCDF	0.01		436
1234789-HpCDF	0.01		22
12346789-OCDF	0.0001		491
Total TEQ:	Non-Detects = Detection Limit		110
	Non-Detects = 1/2 d.l.		110
	Non-Detects = zero		110

Army Corps of Engineers Saginaw Bay Sediment Results**SB9905**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		12.6
12378-PeCDD	1		13.7
123478-HxCDD	0.1		7.8
123678-HxCDD	0.1		32.4
123789-HxCDD	0.1		24.3
1234678-HpCDD	0.01		482
12346789-OCDD	0.0001	E	4490
2378TCDF	0.1		321
12378-PeCDF	0.05		139
23478-PeCDF	0.5		134
123478-HxCDF	0.1		132
123678-HxCDF	0.1		51
234678-HxCDF	0.1		37.8
123789-HxCDF	0.1	J	3.9
1234678-HpCDF	0.01		899
1234789-HpCDF	0.01		25.4
12346789-OCDF	0.0001		940
Total TEQ:	Non-Detects = Detection Limit		180
	Non-Detects = 1/2 d.l.		180
	Non-Detects = zero		180

Army Corps of Engineers Saginaw Bay Sediment Results**SB9906**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		5.5
12378-PeCDD	1		6.1
123478-HxCDD	0.1	J	3.5
123678-HxCDD	0.1		14.8
123789-HxCDD	0.1		9.8
1234678-HpCDD	0.01		190
12346789-OCDD	0.0001		1500
2378TCDF	0.1		89.3
12378-PeCDF	0.05		35.2
23478-PeCDF	0.5		32.5
123478-HxCDF	0.1		43.3
123678-HxCDF	0.1		18.3
234678-HxCDF	0.1		15.5
123789-HxCDF	0.1	J	1.5
1234678-HpCDF	0.01		372
1234789-HpCDF	0.01		11.1
12346789-OCDF	0.0001		379
Total TEQ:	Non-Detects = Detection Limit		55
	Non-Detects = 1/2 d.l.		55
	Non-Detects = zero		55

Army Corps of Engineers Saginaw Bay Sediment Results**SB9907**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		2.8
12378-PeCDD	1	J	3
123478-HxCDD	0.1	J	1.9
123678-HxCDD	0.1	B	6.4
123789-HxCDD	0.1	J	5
1234678-HpCDD	0.01		80.5
12346789-OCDD	0.0001		665
2378TCDF	0.1		46.3
12378-PeCDF	0.05		21.4
23478-PeCDF	0.5		17.8
123478-HxCDF	0.1		25
123678-HxCDF	0.1		9.3
234678-HxCDF	0.1		8
123789-HxCDF	0.1	J	0.89
1234678-HpCDF	0.01		143
1234789-HpCDF	0.01		5.7
12346789-OCDF	0.0001		141
Total TEQ:	Non-Detects = Detection Limit		28
	Non-Detects = 1/2 d.l.		28
	Non-Detects = zero		28

Army Corps of Engineers Saginaw Bay Sediment Results**SB9908**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		5.5
12378-PeCDD	1		5.8
123478-HxCDD	0.1	J	3.6
123678-HxCDD	0.1		11.9
123789-HxCDD	0.1		9.9
1234678-HpCDD	0.01		175
12346789-OCDD	0.0001		1400
2378TCDF	0.1		68.8
12378-PeCDF	0.05		28.6
23478-PeCDF	0.5		25.7
123478-HxCDF	0.1		36.8
123678-HxCDF	0.1		15.5
234678-HxCDF	0.1		14.9
123789-HxCDF	0.1	J	1.3
1234678-HpCDF	0.01		443
1234789-HpCDF	0.01		10.9
12346789-OCDF	0.0001		351
Total TEQ:	Non-Detects = Detection Limit		48
	Non-Detects = 1/2 d.l.		48
	Non-Detects = zero		48

Army Corps of Engineers Saginaw Bay Sediment Results

SB9909

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		4.7
12378-PeCDD	1	J	4.9
123478-HxCDD	0.1	J	3.2
123678-HxCDD	0.1		11.5
123789-HxCDD	0.1		8.1
1234678-HpCDD	0.01		188
12346789-OCDD	0.0001		1730
2378TCDF	0.1		65
12378-PeCDF	0.05		27
23478-PeCDF	0.5		21.2
123478-HxCDF	0.1		32.3
123678-HxCDF	0.1		12.9
234678-HxCDF	0.1		14.6
123789-HxCDF	0.1	J	0.95
1234678-HpCDF	0.01		309
1234789-HpCDF	0.01		8.9
12346789-OCDF	0.0001		286
Total TEQ:		Non-Detects = Detection Limit	42
		Non-Detects = 1/2 d.l.	42
		Non-Detects = zero	42

Army Corps of Engineers Saginaw River Sediment Results**SR9901**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		9.2
12378-PeCDD	1		6.7
123478-HxCDD	0.1	J	3
123678-HxCDD	0.1		23.6
123789-HxCDD	0.1		9.5
1234678-HpCDD	0.01		498
12346789-OCDD	0.0001	E	4510
2378TCDF	0.1		140
12378-PeCDF	0.05		50.9
23478-PeCDF	0.5		45
123478-HxCDF	0.1		65.1
123678-HxCDF	0.1		20.7
234678-HxCDF	0.1		14.7
123789-HxCDF	0.1	J	1.2
1234678-HpCDF	0.01		888
1234789-HpCDF	0.01		28.5
12346789-OCDF	0.0001		1340
Total TEQ:	Non-Detects = Detection Limit		83
	Non-Detects = 1/2 d.l.		83
	Non-Detects = zero		83

Army Corps of Engineers Saginaw River Sediment Results**SR9902**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		2.3
12378-PeCDD	1	J	2.1
123478-HxCDD	0.1	ND	1.7
123678-HxCDD	0.1		5.8
123789-HxCDD	0.1	J	2.5
1234678-HpCDD	0.01		91.5
12346789-OCDD	0.0001		862
2378TCDF	0.1		117
12378-PeCDF	0.05		41.4
23478-PeCDF	0.5		37
123478-HxCDF	0.1		32.7
123678-HxCDF	0.1		10.8
234678-HxCDF	0.1		6
123789-HxCDF	0.1	ND	1.3
1234678-HpCDF	0.01		134
1234789-HpCDF	0.01		6.7
12346789-OCDF	0.0001		191
Total TEQ:	Non-Detects = Detection Limit		45
	Non-Detects = 1/2 d.l.		45
	Non-Detects = zero		45

Army Corps of Engineers Saginaw River Sediment Results**SR9903**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		6.8
12378-PeCDD	1		8.8
123478-HxCDD	0.1		5.1
123678-HxCDD	0.1		45.2
123789-HxCDD	0.1		16.5
1234678-HpCDD	0.01		913
12346789-OCDD	0.0001	E	7440
2378TCDF	0.1	E	894
12378-PeCDF	0.05		340
23478-PeCDF	0.5		287
123478-HxCDF	0.1		362
123678-HxCDF	0.1		73.6
234678-HxCDF	0.1		40.5
123789-HxCDF	0.1	J	3.1
1234678-HpCDF	0.01		964
1234789-HpCDF	0.01		188
12346789-OCDF	0.0001		2030
Total TEQ:	Non-Detects = Detection Limit		340
	Non-Detects = 1/2 d.l.		340
	Non-Detects = zero		340

Army Corps of Engineers Saginaw River Sediment Results**SR9904**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		2.2
12378-PeCDD	1	J	2
123478-HxCDD	0.1	J	1
123678-HxCDD	0.1	J	5
123789-HxCDD	0.1	J	3
1234678-HpCDD	0.01		60.1
12346789-OCDD	0.0001		598
2378TCDF	0.1		114
12378-PeCDF	0.05		36.6
23478-PeCDF	0.5		32.7
123478-HxCDF	0.1		32
123678-HxCDF	0.1		8.4
234678-HxCDF	0.1		5.3
123789-HxCDF	0.1	ND	1
1234678-HpCDF	0.01		230
1234789-HpCDF	0.01		5.2
12346789-OCDF	0.0001		194
Total TEQ:	Non-Detects = Detection Limit		42
	Non-Detects = 1/2 d.l.		42
	Non-Detects = zero		42

Army Corps of Engineers Saginaw River Sediment Results

SR9905

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		19
12378-PeCDD	1		11.2
123478-HxCDD	0.1		5.6
123678-HxCDD	0.1		53.1
123789-HxCDD	0.1		24.2
1234678-HpCDD	0.01		822
12346789-OCDD	0.0001	E	9350
2378TCDF	0.1	E	567
12378-PeCDF	0.05		403
23478-PeCDF	0.5		246
123478-HxCDF	0.1		435
123678-HxCDF	0.1		97.8
234678-HxCDF	0.1		67.3
123789-HxCDF	0.1		6.5
1234678-HpCDF	0.01	E	2200
1234789-HpCDF	0.01		88
12346789-OCDF	0.0001		3120
Total TEQ: Non-Detects = Detection Limit			330
Non-Detects = 1/2 d.l.			330
Non-Detects = zero			330

Army Corps of Engineers Saginaw River Sediment Results

SR9906

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		1.5
12378-PeCDD	1	J	1.4
123478-HxCDD	0.1	ND,J	0.91
123678-HxCDD	0.1		6.4
123789-HxCDD	0.1	J	3.4
1234678-HpCDD	0.01		213
12346789-OCDD	0.0001		3320
2378TCDF	0.1		246
12378-PeCDF	0.05		44.8
23478-PeCDF	0.5		48.2
123478-HxCDF	0.1		38.6
123678-HxCDF	0.1		9.2
234678-HxCDF	0.1		8
123789-HxCDF	0.1	J	0.95
1234678-HpCDF	0.01		289
1234789-HpCDF	0.01		11.4
12346789-OCDF	0.0001		273
Total TEQ: Non-Detects = Detection Limit			66
Non-Detects = 1/2 d.l.			66
Non-Detects = zero			66

Army Corps of Engineers Saginaw River Sediment Results**SR9907**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1	J	0.64
12378-PeCDD	1	ND	0.1
123478-HxCDD	0.1	ND	0.1
123678-HxCDD	0.1	J	0.97
123789-HxCDD	0.1	J	0.61
1234678-HpCDD	0.01		12
12346789-OCDD	0.0001		97.9
2378TCDF	0.1		32.7
12378-PeCDF	0.05		10.2
23478-PeCDF	0.5		8.9
123478-HxCDF	0.1	B	7.9
123678-HxCDF	0.1	J	1.9
234678-HxCDF	0.1	J	1.4
123789-HxCDF	0.1	ND	0.1
1234678-HpCDF	0.01		44.9
1234789-HpCDF	0.01	J	1.2
12346789-OCDF	0.0001		36.5
Total TEQ:	Non-Detects = Detection Limit		11
	Non-Detects = 1/2 d.l.		11
	Non-Detects = zero		11

Army Corps of Engineers Saginaw River Sediment Results**SR9908**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		1.2
12378-PeCDD	1	J	1.1
123478-HxCDD	0.1	J	0.42
123678-HxCDD	0.1	J	2.6
123789-HxCDD	0.1	J	1.9
1234678-HpCDD	0.01		34.5
12346789-OCDD	0.0001		305
2378TCDF	0.1		84.7
12378-PeCDF	0.05		22.6
23478-PeCDF	0.5		18.5
123478-HxCDF	0.1		18.4
123678-HxCDF	0.1	J	4.3
234678-HxCDF	0.1	J	3.4
123789-HxCDF	0.1	ND	0.4
1234678-HpCDF	0.01		75.3
1234789-HpCDF	0.01	J	4
12346789-OCDF	0.0001		78.7
Total TEQ:	Non-Detects = Detection Limit		25
	Non-Detects = 1/2 d.l.		25
	Non-Detects = zero		25

Army Corps of Engineers Saginaw River Sediment Results**SR9909**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		3.2
12378-PeCDD	1	J	3.1
123478-HxCDD	0.1	J	1.5
123678-HxCDD	0.1		10.4
123789-HxCDD	0.1		6.8
1234678-HpCDD	0.01		151
12346789-OCDD	0.0001		1300
2378TCDF	0.1		225
12378-PeCDF	0.05		99.6
23478-PeCDF	0.5		77.1
123478-HxCDF	0.1		86.1
123678-HxCDF	0.1		19.2
234678-HxCDF	0.1		13.8
123789-HxCDF	0.1	J	1.2
1234678-HpCDF	0.01		292
1234789-HpCDF	0.01		15.3
12346789-OCDF	0.0001		378
Total TEQ:	Non-Detects = Detection Limit		91
	Non-Detects = 1/2 d.l.		91
	Non-Detects = zero		91

Army Corps of Engineers Saginaw River Sediment Results**SR9910**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		3.6
12378-PeCDD	1	J	4
123478-HxCDD	0.1	J	2.1
123678-HxCDD	0.1		12.5
123789-HxCDD	0.1		8.2
1234678-HpCDD	0.01		173
12346789-OCDD	0.0001		1500
2378TCDF	0.1		241
12378-PeCDF	0.05		118
23478-PeCDF	0.5		86.4
123478-HxCDF	0.1		88.1
123678-HxCDF	0.1		20.9
234678-HxCDF	0.1		20.1
123789-HxCDF	0.1	J	2.2
1234678-HpCDF	0.01		332
1234789-HpCDF	0.01		18.7
12346789-OCDF	0.0001		344
Total TEQ:	Non-Detects = Detection Limit		100
	Non-Detects = 1/2 d.l.		100
	Non-Detects = zero		100

Army Corps of Engineers Saginaw River Sediment Results**SR9911**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		4.7
12378-PeCDD	1	ND,J	3.8
123478-HxCDD	0.1	J	2.3
123678-HxCDD	0.1		12.1
123789-HxCDD	0.1		7.5
1234678-HpCDD	0.01		177
12346789-OCDD	0.0001		1490
2378TCDF	0.1	E	1510
12378-PeCDF	0.05		921
23478-PeCDF	0.5		471
123478-HxCDF	0.1		693
123678-HxCDF	0.1		128
234678-HxCDF	0.1		67.4
123789-HxCDF	0.1		8.5
1234678-HpCDF	0.01		483
1234789-HpCDF	0.01		30.5
12346789-OCDF	0.0001		378
Total TEQ:	Non-Detects = Detection Limit		540
	Non-Detects = 1/2 d.l.		540
	Non-Detects = zero		540

Army Corps of Engineers Saginaw River Sediment Results**SR9912**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		12
12378-PeCDD	1		12.8
123478-HxCDD	0.1		6.1
123678-HxCDD	0.1		36.1
123789-HxCDD	0.1		19.9
1234678-HpCDD	0.01		588
12346789-OCDD	0.0001	E	4820
2378TCDF	0.1		291
12378-PeCDF	0.05		151
23478-PeCDF	0.5		126
123478-HxCDF	0.1		164
123678-HxCDF	0.1		47.5
234678-HxCDF	0.1		30.5
123789-HxCDF	0.1	J	2.9
1234678-HpCDF	0.01		858
1234789-HpCDF	0.01		35.6
12346789-OCDF	0.0001		1170
Total TEQ:	Non-Detects = Detection Limit		170
	Non-Detects = 1/2 d.l.		170
	Non-Detects = zero		170

Army Corps of Engineers Saginaw River Sediment Results**SR9913**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1	ND	0.2
12378-PeCDD	1	ND	0.3
123478-HxCDD	0.1	ND	0.3
123678-HxCDD	0.1	J	0.36
123789-HxCDD	0.1	J	0.23
1234678-HpCDD	0.01	J	5
12346789-OCDD	0.0001		41.4
2378TCDF	0.1	B	6
12378-PeCDF	0.05	J,B	2.6
23478-PeCDF	0.5	J	2.2
123478-HxCDF	0.1	J,B	2.4
123678-HxCDF	0.1	J	0.73
234678-HxCDF	0.1	J	0.41
123789-HxCDF	0.1	ND	0.2
1234678-HpCDF	0.01	B	8.9
1234789-HpCDF	0.01	ND	0.3
12346789-OCDF	0.0001		10.3
Total TEQ:		Non-Detects = Detection Limit	2.9
		Non-Detects = 1/2 d.l.	2.7
		Non-Detects = zero	2.4

Army Corps of Engineers Saginaw River Sediment Results**SR9914**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1	ND	0.3
12378-PeCDD	1	ND	0.3
123478-HxCDD	0.1	ND	0.3
123678-HxCDD	0.1	J	0.35
123789-HxCDD	0.1	ND	0.3
1234678-HpCDD	0.01	J	4.9
12346789-OCDD	0.0001		36.7
2378TCDF	0.1		20.8
12378-PeCDF	0.05		9.7
23478-PeCDF	0.5		7.8
123478-HxCDF	0.1	B	7.2
123678-HxCDF	0.1	J	1.9
234678-HxCDF	0.1	J	0.93
123789-HxCDF	0.1	ND	0.2
1234678-HpCDF	0.01		14.6
1234789-HpCDF	0.01	J	1
12346789-OCDF	0.0001		14
Total TEQ:		Non-Detects = Detection Limit	8.4
		Non-Detects = 1/2 d.l.	8.1
		Non-Detects = zero	7.7

Army Corps of Engineers Saginaw River Sediment Results**SR9915**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1	J	0.41
12378-PeCDD	1	ND	0.2
123478-HxCDD	0.1	ND	0.2
123678-HxCDD	0.1	J	0.59
123789-HxCDD	0.1	ND	0.2
1234678-HpCDD	0.01		9
12346789-OCDD	0.0001		73.2
2378TCDF	0.1	B	6.7
12378-PeCDF	0.05	JB	2.7
23478-PeCDF	0.5	J	2.1
123478-HxCDF	0.1	JB	3.4
123678-HxCDF	0.1	J	0.87
234678-HxCDF	0.1	J	0.53
123789-HxCDF	0.1	ND	0.2
1234678-HpCDF	0.01		12.5
1234789-HpCDF	0.01	J	0.63
12346789-OCDF	0.0001		14.5
Total TEQ:	Non-Detects = Detection Limit		3.3
	Non-Detects = 1/2 d.l.		3.2
	Non-Detects = zero		3.0

Army Corps of Engineers Saginaw River Sediment Results**SR9916**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		1.6
12378-PeCDD	1	J	1.6
123478-HxCDD	0.1	J	0.97
123678-HxCDD	0.1	J	4.4
123789-HxCDD	0.1	J	3
1234678-HpCDD	0.01		68.1
12346789-OCDD	0.0001		630
2378TCDF	0.1		83.2
12378-PeCDF	0.05		25.3
23478-PeCDF	0.5		21.9
123478-HxCDF	0.1		23.7
123678-HxCDF	0.1		6.9
234678-HxCDF	0.1		5.4
123789-HxCDF	0.1	J	0.57
1234678-HpCDF	0.01		131
1234789-HpCDF	0.01		5.4
12346789-OCDF	0.0001		143
Total TEQ:	Non-Detects = Detection Limit		30
	Non-Detects = 1/2 d.l.		30
	Non-Detects = zero		30

Army Corps of Engineers Saginaw River Sediment Results**SR9917**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		7.8
12378-PeCDD	1		6.1
123478-HxCDD	0.1	J	3.2
123678-HxCDD	0.1		22.8
123789-HxCDD	0.1		12
1234678-HpCDD	0.01		347
12346789-OCDD	0.0001		2480
2378TCDF	0.1	E	530
12378-PeCDF	0.05		229
23478-PeCDF	0.5		182
123478-HxCDF	0.1		139
123678-HxCDF	0.1		36.2
234678-HxCDF	0.1		23.7
123789-HxCDF	0.1	J	2.8
1234678-HpCDF	0.01		506
1234789-HpCDF	0.01		22.6
12346789-OCDF	0.0001		622
Total TEQ:	Non-Detects = Detection Limit		200
	Non-Detects = 1/2 d.l.		200
	Non-Detects = zero		200

Army Corps of Engineers Saginaw River Sediment Results**SR9918**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		9.7
12378-PeCDD	1		8.3
123478-HxCDD	0.1	J	4.1
123678-HxCDD	0.1		15.2
123789-HxCDD	0.1		12
1234678-HpCDD	0.01		254
12346789-OCDD	0.0001		2120
2378TCDF	0.1	E	366
12378-PeCDF	0.05	X	57.6
23478-PeCDF	0.5		69
123478-HxCDF	0.1		44.6
123678-HxCDF	0.1		12.8
234678-HxCDF	0.1		16.9
123789-HxCDF	0.1	J	0.81
1234678-HpCDF	0.01		322
1234789-HpCDF	0.01	ND	1.5
12346789-OCDF	0.0001		493
Total TEQ:	Non-Detects = Detection Limit		110
	Non-Detects = 1/2 d.l.		110
	Non-Detects = zero		110

Army Corps of Engineers Saginaw River Sediment Results**SR9919**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		25.6
12378-PeCDD	1		13.4
123478-HxCDD	0.1		6.1
123678-HxCDD	0.1		32.7
123789-HxCDD	0.1		21.1
1234678-HpCDD	0.01		536
12346789-OCDD	0.0001	E	4580
2378TCDF	0.1		173
12378-PeCDF	0.05		67.9
23478-PeCDF	0.5		63.1
123478-HxCDF	0.1		92.5
123678-HxCDF	0.1		29
234678-HxCDF	0.1		25.1
123789-HxCDF	0.1	J	3.1
1234678-HpCDF	0.01		748
1234789-HpCDF	0.01		36.6
12346789-OCDF	0.0001		1140
Total TEQ:	Non-Detects = Detection Limit		130
	Non-Detects = 1/2 d.l.		130
	Non-Detects = zero		130

Army Corps of Engineers Saginaw River Sediment Results**SR9920**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		5.5
12378-PeCDD	1		6.4
123478-HxCDD	0.1	ND	0.9
123678-HxCDD	0.1		29.5
123789-HxCDD	0.1		16.2
1234678-HpCDD	0.01		378
12346789-OCDD	0.0001		3390
2378TCDF	0.1		201
12378-PeCDF	0.05	X	129
23478-PeCDF	0.5		79.2
123478-HxCDF	0.1		123
123678-HxCDF	0.1		35.4
234678-HxCDF	0.1		30.4
123789-HxCDF	0.1	ND	0.7
1234678-HpCDF	0.01		732
1234789-HpCDF	0.01		35.6
12346789-OCDF	0.0001		1070
Total TEQ:	Non-Detects = Detection Limit		110
	Non-Detects = 1/2 d.l.		110
	Non-Detects = zero		110

Army Corps of Engineers Saginaw River Sediment Results

SR9921

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		5.1
12378-PeCDD	1		6.3
123478-HxCDD	0.1	J	2.9
123678-HxCDD	0.1		17
123789-HxCDD	0.1		11
1234678-HpCDD	0.01		256
12346789-OCDD	0.0001		2770
2378TCDF	0.1		334
12378-PeCDF	0.05		202
23478-PeCDF	0.5		117
123478-HxCDF	0.1		130
123678-HxCDF	0.1		35.1
234678-HxCDF	0.1		23.6
123789-HxCDF	0.1	J	1.8
1234678-HpCDF	0.01		412
1234789-HpCDF	0.01		25.8
12346789-OCDF	0.0001		673
Total TEQ: Non-Detects = Detection Limit			140
Non-Detects = 1/2 d.l.			140
Non-Detects = zero			140

Army Corps of Engineers Saginaw River Sediment Results

SR9922

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1	ND	0.2
12378-PeCDD	1	ND	0.2
123478-HxCDD	0.1	ND	0.2
123678-HxCDD	0.1	JB	0.61
123789-HxCDD	0.1	ND	0.2
1234678-HpCDD	0.01	B	8.4
12346789-OCDD	0.0001		67.7
2378TCDF	0.1		19.1
12378-PeCDF	0.05		13.9
23478-PeCDF	0.5		9.7
123478-HxCDF	0.1		10.4
123678-HxCDF	0.1	J	2.7
234678-HxCDF	0.1	JB	1.7
123789-HxCDF	0.1	ND	0.2
1234678-HpCDF	0.01		14.3
1234789-HpCDF	0.01	J	1.4
12346789-OCDF	0.0001		17.7
Total TEQ: Non-Detects = Detection Limit			9.7
Non-Detects = 1/2 d.l.			9.5
Non-Detects = zero			9.2

Army Corps of Engineers Saginaw River Sediment Results**SR9923**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		9.9
12378-PeCDD	1		6.8
123478-HxCDD	0.1	J	3.5
123678-HxCDD	0.1		30.4
123789-HxCDD	0.1		14.3
1234678-HpCDD	0.01		426
12346789-OCDD	0.0001	E	5180
2378TCDF	0.1		197
12378-PeCDF	0.05		90.4
23478-PeCDF	0.5		65
123478-HxCDF	0.1		92.8
123678-HxCDF	0.1		29.4
234678-HxCDF	0.1		27
123789-HxCDF	0.1	J	2.3
1234678-HpCDF	0.01		844
1234789-HpCDF	0.01		36.3
12346789-OCDF	0.0001		1270
Total TEQ:	Non-Detects = Detection Limit		110
	Non-Detects = 1/2 d.l.		110
	Non-Detects = zero		110

Army Corps of Engineers Saginaw River Sediment Results**SR9924**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		19.9
12378-PeCDD	1		19.1
123478-HxCDD	0.1		14.3
123678-HxCDD	0.1		47.6
123789-HxCDD	0.1		43.1
1234678-HpCDD	0.01		751
12346789-OCDD	0.0001	E	6050
2378TCDF	0.1		442
12378-PeCDF	0.05	X	214
23478-PeCDF	0.5		160
123478-HxCDF	0.1		258
123678-HxCDF	0.1		72.3
234678-HxCDF	0.1		47.8
123789-HxCDF	0.1	J	4.4
1234678-HpCDF	0.01	E	2290
1234789-HpCDF	0.01		69.1
12346789-OCDF	0.0001		2030
Total TEQ:	Non-Detects = Detection Limit		250
	Non-Detects = 1/2 d.l.		250
	Non-Detects = zero		250

Army Corps of Engineers Saginaw River Sediment Results**SR9925**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		8.2
12378-PeCDD	1		8
123478-HxCDD	0.1	J	3.6
123678-HxCDD	0.1		18.5
123789-HxCDD	0.1		11.3
1234678-HpCDD	0.01		250
12346789-OCDD	0.0001		2240
2378TCDF	0.1		276
12378-PeCDF	0.05		117
23478-PeCDF	0.5		99.9
123478-HxCDF	0.1		102
123678-HxCDF	0.1		33.2
234678-HxCDF	0.1		24.5
123789-HxCDF	0.1	J	2
1234678-HpCDF	0.01		400
1234789-HpCDF	0.01		23.8
12346789-OCDF	0.0001		585
Total TEQ:	Non-Detects = Detection Limit		130
	Non-Detects = 1/2 d.l.		130
	Non-Detects = zero		130

Army Corps of Engineers Saginaw River Sediment Results**SR9926**

Analyte	TEF	Flags	Concentration pg/g (ppt)
2378-TCDD	1		8.1
12378-PeCDD	1		8.1
123478-HxCDD	0.1	J	4
123678-HxCDD	0.1		24.2
123789-HxCDD	0.1		13.5
1234678-HpCDD	0.01		285
12346789-OCDD	0.0001		2470
2378TCDF	0.1		309
12378-PeCDF	0.05		139
23478-PeCDF	0.5		118
123478-HxCDF	0.1		139
123678-HxCDF	0.1		38.3
234678-HxCDF	0.1		26
123789-HxCDF	0.1	J	3.3
1234678-HpCDF	0.01		595
1234789-HpCDF	0.01		26.7
12346789-OCDF	0.0001		827
Total TEQ:	Non-Detects = Detection Limit		150
	Non-Detects = 1/2 d.l.		150
	Non-Detects = zero		150